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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,678	05/02/2001	Christine A. Frysz	04645.0862	4808

7590 11/19/2003  
Michael F. Scalise  
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EXAMINER

WILLS, MONIQUE M

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/847,678

Applicant(s)

FRYSZ ET AL.

Examiner

Wills M Monique

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 & 27-36 is/are rejected.
- 7) ☒ Claim(s) 6 & 8-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Allowable Subject Matter***

Claims 6 & 8-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The instant claims would be allowable over the prior art of record, because the prior art is silent to an electrochemical cell comprising a glass-to-metal seal wherein the first coefficient of thermal expansion of glass, second coefficient of thermal expansion of the terminal and third coefficient of thermal expansion of the casing support have a compression arrangement with values specified by the instant claims.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "Cabal-12", "TA-23", "446 SS", "29-4-2 SS", "304L SS" are of uncertain meaning render the claims vague and indefinite. It is unclear as to whether these terms are material standards or trademarks.

In the event that these materials are trademarks, where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. Ex parte Simpson, 21 8 USPQ 1020 (Bd. App. 1 982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe [3] and, accordingly, the identification/description is indefinite.

In the event that these terms are material standards, does each term specifically identify a particular material with specific physical characteristics? For example do all Cabal -12 materials have the same coefficient of thermal expansion? What characteristics would the material have to have to be considered a Cabal-12?

The term "titanium alloy of grades 1 to & 9" is of uncertain meaning rendering the claims vague and indefinite. Grade according to what standards? What characteristics would the titanium alloy have to have to be categorized as a specific grade material?

The claim has not further been treated on the merits.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 27,28 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by G. Baas et al. U.S. Patent 3,225,132.

Baas teaches glass-to-metal seal comprising an insulating glass (3) with a first coefficient of thermal expansion  $90 \times 10^{-7}$  (col. 2, lines 10-20), a terminal lead (2) with a coefficient of thermal expansion of  $95 \times 10^{-7}$  (col. 2, lines 1-10) and a support ring (1) with a third coefficient of thermal expansion of  $120 \times 10^{-7}$  (col. 2, lines 1-5). The insulating glass extends between and seals to the terminal lead and support surrounding the insulating glass (Fig. 1). The first CTE of  $90 \times 10^{-7}$  is significantly less than the second CTE of  $95 \times 10^{-7}$ . The second CTE of  $95 \times 10^{-7}$  and the third CTE of  $120 \times 10^{-7}$  differ by  $2.5 \times 10^{-6}$  (claim 31).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5,27, 28-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Dey U.S. Patent 4,053,692 in view of Azom.com as evidentiary support.

Dey teaches providing an electrochemical cell with a hermetic glass-to-metal seal (abstract). The reference teaches providing an anode 114 in electrical association with cathode 116 housed inside stainless steel can 118 with an electrolyte (col. 2, lines 20-40). The anode is connected to a terminal lead 112 (col. 2, lines 30-35). The cathode is electrically connected to the can (col. 2, lines 30-35). The terminal lead is electrically isolated by insulating glass (col. 1, lines 60-68) from the stainless steel casing (Fig. 1). The glass has a first coefficient of thermal expansion from  $60 \times 10^{-7}$  to  $80 \times 10^{-7}$  (col 3, lines 20-25). The terminal lead is made of tantalum and has a second coefficient of thermal expansion of  $70 \times 10^{-7}$  (col. 3, lines 1-7). The stainless steel ring 122 and stainless steel outer casing have a third coefficient of thermal expansion from  $100 \times 10^{-7}$  to  $170 \times 10^{-7}$  as evidenced by Azom.com Table 1 on page 5. Azom.com teaches that stainless steel materials have a coefficient of thermal expansion ranging from  $100 \times 10^{-7}$  to  $170 \times 10^{-7}$  (page. 5). Therefore, the CTE of the terminal lead and the casing differ by about  $3 \times 10^{-6}$  to  $10 \times 10^{-6}$  (meeting claims 5,31 & 36). The terminal lead may

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also be stainless steel of all types (col. 2, lines 45-50), and according to Azom.com the material may have a coefficient of thermal expansion ranging from  $100 \times 10^{-7}$  to  $170 \times 10^{-7}$ . Therefore, the CTE of the glass ( $60 \times 10^{-7}$  to  $80 \times 10^{-7}$ ) and the terminal lead may differ by about  $9 \times 10^{-6}$  (meeting claims 3,29 & 34). The terminal lead and casing support may both be made of stainless steel having the same CTE and therefore differ by less than about  $2 \times 10^{-6}$  (meeting claims 4,30 & 35).

### ***Conclusions***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (703) 305-0073. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski, may be reached at 703-308-4333.

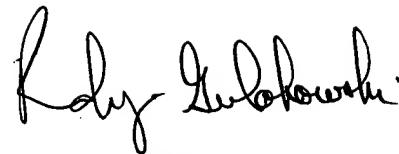
The unofficial fax number is (703) 305-3599. The Official fax number for non-final amendments is 703-872-9310. The Official fax number for after final amendments is 703-872-9311.

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Mw

11/15/03

A handwritten signature in black ink, appearing to read "Randy Gulakowski". The signature is fluid and cursive, with the first name "Randy" and last name "Gulakowski" clearly distinguishable.

RANDY GULAKOWSKI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700